

# PATENT ABSTRACTS OF JAPAN

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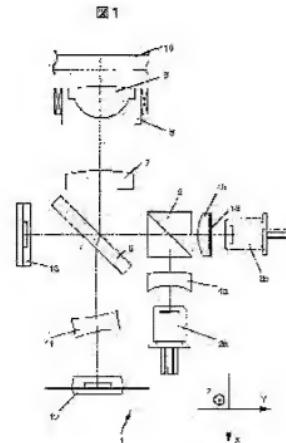
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## (54) OPTICAL HEAD AND OPTICAL DISK DEVICE USING IT

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To miniaturize an optical head which is adaptable to CD-R recording and has compatibility of DVD/CD while securing its performance.

**SOLUTION:** At least two laser beam sources of a first laser beam source which oscillates at a first wavelength of 620-680 nm wavelength band and a second laser beam source which oscillates at a second wavelength of 750-810 nm wavelength band, a collimator lens which is provided in order to form luminous fluxes exited from the first and second laser beam sources into nearly parallel luminous fluxes respectively, and optical part which synthesizes the optical path of the luminous fluxes exited from the first and second laser beam sources is prepared in the optical path between the first and second laser beam sources and the collimator lens, are included. Also, a first auxiliary lens having a function which diverges the luminous flux is arranged in the optical path



between the optical path synthesizing part and the first laser beam source, and a second auxiliary lens having a function which converges the luminous flux is arranged in the optical path between the optical path synthesizing part and the second laser beam source.

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